PSS7

HEALTH CARE COSTS AND UTILIZATION FOR PRIVATELY INSURED PATIENTS TREATED FOR NON-INFECTIOUS UVEITIS IN THE UNITED STATES

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OBJECTIVES: Describe costs and utilization patterns of corticosteroid (CTS), immunosuppressive (IMS), and biologic (BIO) treatment use in patients with chronic non-infectious uveitis. Costs and utilization of CTS, IMS and BIO indicate economic burden but have not been studied in a large sample. **METHODS:** Patients with 31 NPSU diagnosis (ICD-9-CM 360.x–364.x, excluding infectious uveitis) by an ophthalmologist or 32 by a primary care physician, under age 65, with continuous insurance coverage during a six-month baseline were selected from a privately insured claims database (N=80.7 million). Sample index dates were defined as the first prescription/administration of CTS, IMS, or BIO between 2003-2009. CTS patients had 32 10-day or 31 30-day scripts. Analysis was in a per-member-per-month (PMPM) framework based on treatment episodes, defined as continuous medication use within the same class. Wilcoxon rank-sum and chi-square tests were used for comparisons of costs and categorical outcomes. **RESULTS:** CTS (N=19,426), IMS (N=5,466) and BIO (N=1,694) samples were selected; average time on continuous therapy (i.e., treatment episode duration) was 1.79, 3.66, and 8.18 months ($p<0.05$ across groups). Baseline Charlson Comorbidity Index was highest for BIO (0.83), then IMS (0.78), then CTS (0.039) ($p<0.05$ across groups). Baseline PMPM inpatient admission rates were 0.021 for CTS, 0.044 for IMS, and 0.045 for BIO ($p<0.05$ across groups); study period values were 0.032, 0.048, and 0.024, respectively ($p<0.05$ CTS different vs. both). Emergency room visits had a similar ordering. Baseline average PMPM costs for CTS were $717; IMS were $1738; and BIO were $1439 ($p<0.05$ across groups). Study period PMPM costs excluding drug or biologic costs were $974 for CTS; were $1592 for IMS; and were $918 for BIO ($p<0.05$ across groups). **CONCLUSIONS:** BIO had the best relative change in outcomes, followed by IMS. There could be underuse of these products relative to CTS.

PSS8

PRODUCTIVITY LOSSES ASSOCIATED WITH VISION IMPAIRMENT IN CANADA

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OBJECTIVES: In Canada, visual impairment is highly prevalent and is associated with a substantial socioeconomic impact on patients, and especially on caregivers. The objective of this study was to explore the current evidence on productivity losses associated with vision impairment, such as caregiver support, and to estimate the cost of these productivity losses in Canada according to visual impairment severity. **METHODS:** A literature search was conducted in MedLine and Embase databases using the keywords "visual acuity," "vision loss," "burden," and "cost." Studies included in the search dated from January 2000 to June 2011. Data were extracted from studies that reported productivity losses according to vision impairment severity and in terms of duration of work lost. The mean number of hours requiring help per year reported in the studies was multiplied by the average Canadian hourly wage ($CAD22.85 in May 2011) to calculate the average costs associated with productivity losses. **RESULTS:** In all, 885 articles addressing the burden of vision impairment were retrieved. Of these, two reported productivity losses in terms of duration of work lost and according to the severity of vision impairment. In both studies, visual impairment severity was categorized by levels of visual acuity (VA). The duration of work lost increased with decreasing visual acuity. On average, patients incurred annual productivity loss-related costs ranging from $CAD347 to $CAD48,183 for VA scores ranging from 20/10 to worse than 20/320, respectively. **CONCLUSIONS:** Productivity losses and related costs associated with vision impairment are substantial, and they correlate with vision loss severity. Caregiver-related costs are the largest component of productivity losses.

PSS9

ECONOMIC BURDEN OF WET AGE-RELATED MACULAR DEGENERATION (WAMD) IN URBAN CHINA

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OBJECTIVES: This study aims to understand the direct and indirect cost of patients with wAMD in urban China, and to assess the economic burden of wAMD in real world from societal perspective. **METHODS:** A cross-sectional study was carried out in 15 key eye centers and hospitals in 4 major cities of China (Beijing, Guangzhou, Shanghai and Chengdu) from August 2010 through April 2011. Study subjects were face-to-face interviewed by trained interviewers using structured questionnaires. Data of patients' demographics, disease history, treatment pattern and economic burden were collected based on medical charts and patient self-reports. Utilities were calculated by regression formula under various measures, including EQ-5D and NEI-VEF-25. Indirect cost was estimated by GDP per capita multiplied by DALYs and productivity weight. All cost were adjusted according to 2010 price index in China. No discount was applied. **RESULTS:** Of the 417 eligible patients, average age was 67.93 (±11.04) years old and 51.32% were male. The average wAMD onset age was 64.87(±11.72) years old with average duration of 2.93 years. A total of 130 patients were bilateral, and a total of 547 wAMD eyes were identified. On average, it costs 3,278 CNY per wAMD outpatient visit. Economic burden of wAMD per eye per year was 29,640 CNY. Based on average life expectancy at 72 years old from national statistics, economic burden of entire course of wAMD per eye was estimated to be 207,450 CNY. Given the wAMD prevalence rate at 0.34% among Chinese above 45 years old, the potential national burden of wAMD was 53.39 billion CNY per year, in which direct medical cost was 16.81 billion CNY, accounting for 31.49%. **CONCLUSIONS:** In urban China, the economic burden for wAMD is heavy both for patients and the society, while indirect cost account for majority part of the burden.

PSS10

COST- EFFECTIVENESS OF RANIBIZUMAB IN PATIENTS WITH NEOVASCULAR WET AGE-RELATED MACULAR DEGENERATION (NAMD) AT THE MEXICAN SOCIAL SECURITY SYSTEM (IMSS)

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OBJECTIVES: To perform a cost-effectiveness analysis of Ranibizumab 0.5mg vs Verteporfin photodynamic therapy (PDT) for the treatment of nAMD from the IMSS perspective. **METHODS:** A Markov model was designed to analyze the disease in patients >40 years-old. A systematic review was performed to obtain transition probabilities used in the model. A hypothetical cohort was built from a retrospective database of patients with nAMD diagnosis at the IMSS*. The model identifies 4 states of changes in vision: Stability, Increase, Loss, Severe-Loss. Cycle duration was 1 month, time horizon 5 years. Efficacy was evaluated by visual acuity gains (VAG) of ≥ 15 letters; % of patient withdrawals due to adverse events (AEs) and average utility score gain. Resource use of direct medical costs was identified from expert review and valuated according to the Unitary Costs List published by the IMSS. Sensitivity analysis was performed using a bootstrap technique. **RESULTS:** Ranibizumab has the highest rate of patients with VAG >15 letters with 25.23% versus 5.95% for Verteporfin PDT. Withdrawals due to AEs were 3.91% versus 5.05% for Ranibizumab and Verteporfin PDT. Utilities were greater with Ranibizumab of 0.216 vs 0.143 for Verteporfin PDT. The total annual cost per treatment was higher with Verteporfin PDT US$78,983.19 than Ranibizumab US$71,643.56. Ranibizumab drug acquisition was US$124.6 lower than Verteporfin PDT. The costs were similar between the two therapies in the Stability and Increase States; whereas in the Loss and Severe-Loss, Ranibizumab had the lower cost for 29.8% and 16.6% less than Verteporfin PDT. Sensitivity analysis showed absolute dominance and cost-effectiveness of Ranibizumab in around 50% and 100% of the times, respectively. **CONCLUSIONS:** For patients with nAMD, treatment with Ranibizumab is an effective and cost-saving option compared with Verteporfin PDT, allowing savings of up to US$532 per patient-year which represents 9.3% of the total cost. Results are consistent with previous analysis.

PSS11

ECONOMIC ANALYSIS OF ETANERCEPT AS PAUSED THERAPY IN MODERATE TO SEVERE PSORIASIS FROM A PRIVATE PERSPECTIVE IN BRAZIL

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OBJECTIVES: Biologic treatment after systemic drugs fail in psoriasis is indicated for obtaining clinical response. Etanercept effectiveness is not lost in retreatment regimens, which allows continuous or paused therapeutic schemes. The inclusion of etanercept in the private health care system practice represents a breakthrough to psoriasis treatment in Brazil. This study aims to perform cost-effectiveness and cost-utility analysis of biologic alternatives for moderate to severe psoriasis in Brazil, from a private payer's perspective. **METHODS:** A decision-tree model simulates psoriasis evolution after treatment with etanercept paused (50mg twice a week for 12 weeks, followed by 25mg twice a week; 12-week treatment cycle and 12-week interruption), adalimumab (80mg at first week, followed by 40mg in the second week, and then 40mg every two weeks) or infliximab (5mg/kg at weeks 0, 2 and 6 and then every 8 weeks) and their associated costs in a 96-week time horizon. Therapy continuation or switch was evaluated at week 24. Effectiveness measures were PASI 75 success rate and quality adjusted life years (QALY) gained. Costs included biologicals, medical follow-up and adverse events management, collected from Brazil private official databases (values represented 2010 USD). Probabilistic sensitivity analyses were performed trough Monte Carlo simulation. A 5% discount rate was applied for costs and benefits. **RESULTS:** Effectiveness resulted in [PASI 75, QALY] etanercept [51.3%, 1.5360], adalimumab [50.5%, 1.5339] and infliximab [37.2%, 1.5001]. Treatment costs were 90,644USD, 110,663USD and 121,697USD, respectively. Etanercept paused represented the least costly in all comparisons: 20,019USD and 31,054USD less than adalimumab and infliximab, respectively. Acceptability curves showed etanercept paused as the most cost-effective biologic. **CONCLUSIONS:** In this analysis, etanercept presented the greatest effectiveness in paused therapeutic scheme. Due to its lower costs, etanercept showed to be cost-saving regarding PASI 75 success rate and QALY's gained over other biologic treatments in psoriasis management at Brazil private healthcare system.

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ECONOMIC ANALYSIS OF ETANERCEPT AS CONTINUOUS OR PAUSED THERAPY IN MODERATE TO SEVERE PSORIASIS FROM A PUBLIC PERSPECTIVE IN VENEZUELA

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OBJECTIVES: Biologic treatment after systemic drugs fail in psoriasis is indicated for obtaining clinical response, what could avoid associated comorbidities. Regarding biological drugs approved for psoriasis, etanercept effectiveness is not lost in